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3 AN APPRAISAL

FROZEN FOOD
LOCKER AND
FREEZER
PROVISIONING
COOPERATIVES,
1965

Farmer Cooperative Service

U.S. DEPARTMENT, OF AGRICULTURE



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FARMER COOPERATIVE SERVICE U.S. DEPARTMENT OF AGRICULTURE WASHINGTON, D.C. 20250

Farmer Cooperative Service conducts research; advises directly with cooperative leaders and others; promotes cooperative organization and development through other Federal and State agencies; and publishes results of its research, issues News for Farmer Cooperatives, and other education material.

This work is aimed (1) to help farmers get better prices for their products and reduce operating expenses, (2) to help rural and small-town residents use cooperatives to develop rural resources, (3) to help these cooperatives expand their services and operate more efficiently, and (4) to help all Americans understand the work of these cooperatives.

GENERAL REPORT 139

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HIGHLIGHTS

This report contains information on location, patronage, sales volume, processing volume, storage capacity, and merchandising activities of frozen food locker and freezer provisioning cooperatives. Nearly 400 such cooperatives were operating in 34 States when the Farmer Cooperative Service made this study in 1965. Questionnaires submitted in a nation-wide survey of the locker and freezer provisioning industry provided the data for this study.

Some of the more important comparisons between cooperatives and "all firms" of the industry were:

- The estimated number of locker cooperatives in the United States decreased by about two-fifths compared with about onethird for all firms.
- About one-half of the cooperatives were located in towns with populations of 1,000 or less, while about one-third of all firms were located in towns of this size.
- Two-thirds of the cooperatives were affiliated with other types of operations in 1965—an increase of 16 percentage points since 1955. Fifty-two percent of all firms were not affiliated with other types of operations—an increase of 6 percentage points since 1955.
- Cooperatives served an average of 505 patrons—a 6-percent decline in 5 years. This is about 75 percent as many patrons as the average for the industry.
- The average cooperative had sales of products and custom services of \$27,500 in 1964, a 12-percent increase over the 1959

- level and about one-third the value of the industry average. Custom services accounted for over half of the sales for the average cooperative (\$15,000), compared with an average of 18 percent for all firms (\$17,600).
- Eighty-three percent of the cooperatives operated meat processing facilities, compared with 93 percent for all firms. About the same percentage of both groups operated slaughtering facilities—44 percent for cooperatives and 41 percent for all firms.
- The average processing volume of meat and poultry was 208,000 pounds per cooperative—the same as it was in 1959, and about 10 percent less than for all firms. Average slaughter volume was 17 percent greater for cooperatives than for all firms, while average curing volume was 25 percent greater for all firms than for cooperatives.
- The average cooperative had 19 percent more lockers installed than all firms and rented an average of 17 percent more lockers.
- Both cooperatives and all firms showed an overall increase in their merchandising and commercial operations over the past 5 years. A major exception to this was a decrease in the number of firms, in both groups, selling home freezers. A smaller percentage of cooperatives than of all firms were engaged in merchandising and commercial activities.

AN APPRAISAL OF FROZEN FOOD LOCKER AND FREEZER PROVISIONING COOPERATIVES, 1965

William R. Seymour and Bert D. Miner Frozen Food Locker Branch Purchasing Division

> This report contains information on developments, sales, processing, size, merchandising, and problems and opportunities of frozen food locker and freezer provisioning cooperatives. It should be helpful to managers and directors of these organizations in improving operations and in serving member-patrons better.

> This report is based on the results of an industrywide study of frozen food locker and freezer provisioners that the Farmer Cooperative Service made in 1965. Some 4,500 of

the approximately 7,200 firms in the industry participated in the survey. Of these participating firms, 170 were cooperatives.

The authors, therefore, were able to compare the average operations of these 170 cooperatives with the average of the entire industry. They also were able to identify important cooperative developments between 1955, 1960, and 1965, since similar studies were made in those years.

Data were tabulated and analyzed with some breakdown by size of towns.

The term "all firms" as used in this report refers to all frozen food locker and freezer provisioning firms that participated in the survey. The term "cooperatives" designates frozen food locker and freezer provisioning cooperatives.

DEVELOPMENT OF THE INDUSTRY

For generations, farmers processed and stored on the farm most of the food supply for their families. They slaughtered livestock and preserved what could not be eaten fresh. They made sausage; cured pork; and canned, dried, and stored fruits and vegetables. With the development of refrigeration, many of these tasks were taken over by frozen food locker and freezer provisioning plants.

Today, more than 7,000 such plants exist in this country; about 400 of them are cooperatives. They provide farmers and others

with custom processing services, and refrigerated storage.

Number of Firms

The first frozen food locker plant on record was started in 1908 when farmers began storing meat and other perishable foods at the Chico Ice and Cold Storage plant in California. The first cooperative to provide freezing and storage service was the Whatcom County Dairymen's Association, Bellingham, Wash., in 1923. The second cooperative was the Walla Walla Dairymen's Association, started in 1927. By 1935, cooperative locker plants

¹ Paul Wilkins, former Chief of the Frozen Food Locker Branch, participated in the planning and execution of this study.

numbered about 30. Numbers of cooperatives followed about the same trend as the total industry: A gradual increase until about 1950, then a decline (fig. 1).

Location of Firms

Figure 2 shows the estimated number of cooperatives by region in 1965. About 65 percent of the cooperatives were located in the North Central Region.

The locker industry started in rural communities and has not spread to cities to any great extent over the years. Most of the cooperatives reporting in 1965, as in 1960 and 1955, were located in small rural towns (table 1).

The increase in percentage of firms serving communities of over 1,000 since 1960 was mainly attributed to the fact that cooperatives located in towns with 1,000 people or less have discontinued operations at a faster rate than firms in larger towns.

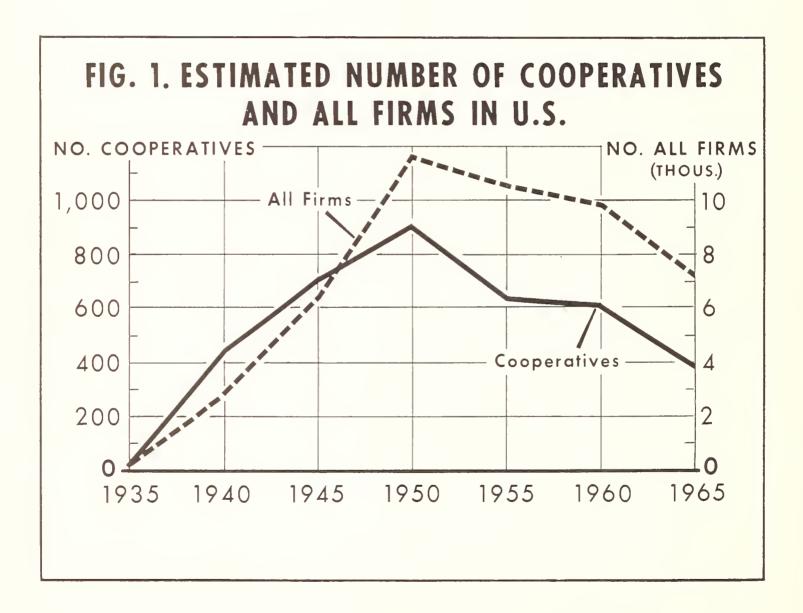


Fig. 2

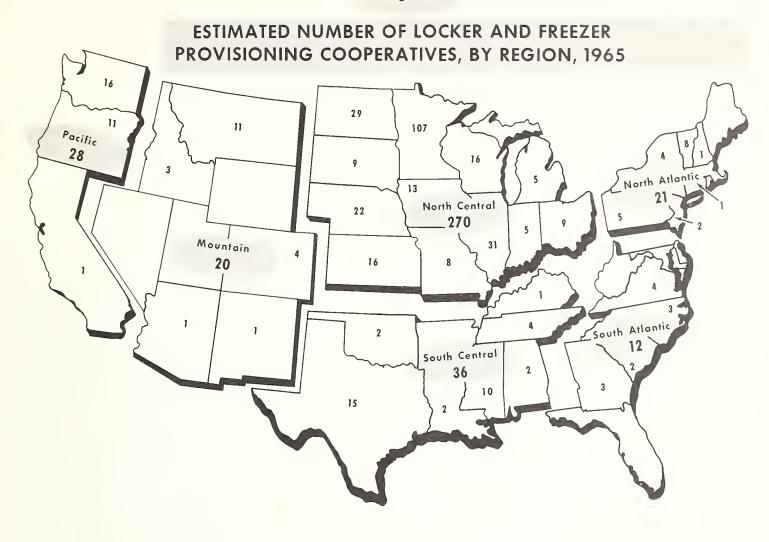


TABLE 1.--Percentage of locker and freezer provisioning cooperatives and all firms in towns of specified population, January 1955, 1960, and 1965

Population of town	Cooperatives			All firms		
Population of town	1955	1960	1965	1955	1960	1965
			Perc	ent		
1,000 and under	49 34 9 6 2	57 31 5 5	51 32 7 5 5	39 32 10 .8	36 32 9 9	36 33 9 10 12
Total	100	100	100	100	100	100

Affiliation

Cooperative locker plants have been organized and financed in a number of ways. Most early plants were set up as departments of cooperative creameries, cheese factories, milk plants, elevators, and farm supply associations. In some States, local farm organizations were responsible for organizing and establishing locker plants.

Before 1948, 63 percent of all locker cooperatives were affiliated with other cooperative operations. During 1948-54, most cooperatives formed were nonaffiliated. In 1955, cooperatives were equally divided between affiliated and nonaffiliated plants. Since 1955, the number of nonaffiliated cooperatives has declined more rapidly than that of affiliated ones. By 1965, only 34 percent of the cooperatives reporting were nonaffiliated (table 2).

TABLE 2.--Percentage of locker and freezer provisioning cooperatives and all firms by affiliation, January 1955, 1965

Status	Cooper	Cooperatives		irms
Status	1955	1965	1955	1965
		Perc	ent	
Affiliated with				
Grocery store	11	17	37	35
Ice and cold storage	2	3	6	6
Dairy plant	29	35	5	3
Other	8	11	6	4
Nonaffiliated	50	34	46	52
Total	100	100	100	100

Patronage

In 1964, the cooperatives reporting served an average of 505 patrons. As shown in the following tabulation this was 160 fewer patrons (24 percent) than the average served by all firms:

Year	Cooperatives	All firms		
	Numl	ber		
1954	395	478		
1959	540	653		
1964	505	665		

The number of patrons served per establishment in 1964 represented a 6-percent drop for cooperatives and a 1.5-percent increase for all firms over 1959.

Cooperatives also serve the institutional trade. They store commodities for the National School Lunch Program and commercial establishments, and sell processed products to restaurants, hotels, hospitals, Government institutions, and other establishments.

In 1964, cooperatives served about one-third as many institutional customers as did all firms—an average of 8 for cooperatives compared to 23 for all firms.

Employment

The average cooperative employed four people, compared with an average of five for all firms. The larger average number of employees in all firms was due to the larger volume of business done by all firms.

SALE OF PRODUCTS AND SERVICES

One measure of business size and activity is dollar volume. This measure can be used by managers and boards of directors of cooperatives in making plans to improve their operations.

Questions that might help in planning are these: Is dollar volume sufficient to achieve optimum operations? Have increases in dollar volume been adequate to offset increases in expenses? How does dollar volume in one plant relate to volume in similar plants? How does dollar volume relate to the average volume of all firms—larger, smaller, or about the same? What shares do various parts of the business contribute to total dollar volume?

Information on average dollar volume of sales helps cooperative managements answer these and other questions.

Average Firm Sales

Average sales of products and services per cooperative were \$27,500, less than one-third the average of all firms--\$98,000 (table 3). These amounts were equivalent to an average sale of about \$55 per patron for cooperatives and \$150 per patron for all firms.

Average sales per cooperative increased 12 percent between 1959 and 1964 while average sales for all firms increased 15 percent. Significantly, this increase was substantially less than the increase which occurred during 1954-59. During that period, cooperatives increased average sales by 65 percent, and all firms increased by 225 percent.

Over 60 percent of sales by all firms came from the sale of meat and poultry. Cooperatives averaged sales of \$10,600 from this source or about one-sixth that of all firms. This source of revenue, as a percentage of

total revenue, increased an average of 5 percentage points for all firms between 1959 and 1964. The average for cooperatives declined 1 percentage point.

Cooperatives sold about the same number of homefreezers in both 1959 and 1964 while the average for all firms dropped 45 percent.

Sales of other frozen foods contributed about the same amount to average sales of cooperatives in 1959 and 1964—3 percent. This source of income contributed 8 percent to the average sales for all firms.

Custom services were the most important source of income for cooperatives in both 1959 and 1964—accounting for about 55 percent of total sales in both years. Sales of custom services for all firms amounted to about 14 percent of total sales in 1959 and 18 percent in 1964.

One would normally expect the cooperatives to make their best showing in the area of custom services because of their basic purpose. That is, cooperatives were established primarily as service organizations for their member-patrons. They did not substantially change their mode of operation between 1960 and 1965 either in total sales per firm or source of sales. All firms have been putting a greater emphasis on custom services, and have achieved a larger total volume than they had in the past.

TABLE 3.--Average sales by locker and freezer provisioning cooperatives and all firms, by source, 1959 and 1964

	Average sales per firm				
Source	Cooperatives		All firms		
	1959	1964	1959	1964	
	Dollars				
Custom services Meat and poultry Other frozen foods Homefreezers Miscellaneous	13,300 9,800 600 200 800	15,000 10,600 900 300 700	12,000 47,900 7,700 16,200 1,700	17,600 59,800 7,900 8,800 3,900	
All sources	24,700	27,500	85,500	98,000	

Range of Sales

Sales volume of firms in the locker and freezer provisioning industry ranged from less than \$1,000 to many millions of dollars in 1964. In that year, 5 percent of the cooperatives reporting had sales of over \$100,000, compared with 19 percent for all firms (table 4). This was an increase of 4 percentage

TABLE 4.--Percentage of locker and freezer provisioning cooperatives and all firms with specified sales volumes, 1959 and 1964

Range of sales	Coope	ratives	All firms	
range of Sales	1959	1964	1959	1964
Dollars	Percent			
Under 10,000	33	30	22	23
10,000 - 24,999	30	32	20	21
25,000 - 49,999	22	26	20	21
50,000 - 74,999	10	3	11	10
75,000 - 99,999	4	4	6	6
100,000 and over	1	5	21	19
Total	100	100	100	100

points for cooperatives and a 2-percentagepoint drop for all firms since 1959.

In 1964 about 60 percent of the cooperatives compared with about 40 percent of all firms had sales of under \$25,000. This was about the same proportion as 5 years earlier for both groups.

Firms having the larger sales were usually in the larger communities. For both groups, over half the firms with sales of under \$1,000 were located in communities of 1,000 population or less. Conversely, over half the firms with sales of \$100,000 and over were located in communities of over 25,000 population.

Meat and Poultry Sales

Meat and poultry sales were classified by general sales outlets as follows: (1) Bulk quantities to locker and freezer patrons, (2) retail sales, and (3) sales to the institutional trade.

Both cooperatives and all firms sold about two-thirds of their meat and poultry in bulk quantities to locker and freezer patrons in both 1959 and 1964 (table 5).

In 1959, all firms showed a higher percentage of sales to institutional business than cooperatives did. In 1964, however, cooperatives realized 25 percent of their sales from this source compared to 21 percent for all firms.

TABLE 5.--Percentage of meat sold by locker and freezer provisioning cooperatives and all firms to specified purchasers, 1959 and 1964

	1			
Purchasers	Cooperatives All firms			
r drendser s	1959	1964	1959	1964
	Percent			
Institutions: Schools, restaurants, etc	13	25	22	21
Locker and freezer customers (in bulk)	67	68	65	70
Purchasers over meat counter (retail cuts)	20	7	13	9
Total	100	100	100	100

Sales over the meat counter accounted for the smallest percentage of sales for both cooperatives and all firms in 1964--9 percent for all firms and 7 percent for cooperatives. This reflected a 4-percentage-point decrease for all firms and a 13-percentage-point decline for cooperatives since 1959.

PROCESSING VOLUME

The degree of efficiency a cooperative manager can realize from his processing operation is directly related to the volume of products processed through the plant. Management needs to know the capacity of its processing crew, plants, and equipment and then effort can be directed toward attaining optimum volume. Although optimum volume is not given in this report, information on average volume of cooperatives reporting is given on meat and poultry processing, slaughter volume, and pork curing.

Meat and Poultry

Eighty-three percent of the cooperatives reporting processed meat and poultry compared with 93 percent of all firms. As the accompanying tabulation shows, cooperatives lost 1 percentage point in number of firms reporting meat and poultry processing since 1959, while the percentage of all firms increased by 4 points:

Year	Cooperatives	All firms
	Perce	ent
1954	79	89
1959	84	89
1964	83	93

Pounds of meat and poultry processed by cooperatives in 1964 remained at the same level as 1959, while all firms had a 12-percent increase. As shown by the following tabulation, the average cooperative with processing facilities processed about 10 percent fewer pounds of meat and poultry than the average of all firms:

Year	Cooperatives	All firms
	Pour	nds
1959	208,000	203,000
1964	208,000	227,500

Slaughtering

In 1964 a larger percentage of cooperatives had slaughter facilities than did all firms—44 percent compared to 41 percent. The following tabulation shows that the percentage of all firms providing slaughtering service increased by 5 percentage points between 1959 and 1964, while the percentage of cooperatives remained the same:

Year	Cooperatives	All firms
	Per	cent
1959	44	36
1964	44	41

In 1959 the average cooperative with slaughter facilities slaughtered approximately 8 percent fewer cattle, hogs, and sheep than all firms. Five years later, however, the average cattle, hog, and sheep slaughter volume for cooperatives exceeded the average for all firms by approximately 180 head (17 percent) as shown by accompanying tabulation:

Year	r Cooperatives All fi	
	<u>Hea</u>	ıd
1954	934	8 2 5
1959	741	801
1964	1,030	850

Curing Pork

Forty-six percent of the cooperatives and 41 percent of all firms reported facilities for curing pork in 1964.

The relatively high price of swine in 1964 had a substantial effect on the volume of pork cured by both cooperatives and all firms. In 1964, the average cooperative with curing facilities cured 20,500 pounds of pork compared to 25,600 for all firms—a 32-percent decline in volume for cooperatives and a 12-percent decline for all firms, compared with 1959.

STORAGE CAPACITY AND USE

Until the development of homefreezers in the midforties, frozen food firms were the primary 0° F. storage facilities available to consumers. In recent years, few plants have been constructed for the sole purpose of offering storage service. In fact, most recently constructed plants have been designed to meet the needs of homefreezer owners and institutional trade, with little or no space devoted to lockers.

Total net 0° F. storage space in all firms came to an estimated 47 million cubic feet in 1965; homefreezers made up another estimated 188 million cubic feet, giving a total of 235 million cubic feet. This combined space would hold 7 billion pounds of frozen food at any one time—about 35 pounds for each individual in the United States.

As of January 1965, the average locker cooperative had about 14,000 cubic feet of total refrigerated space. Of this, 8,500 cubic feet was devoted to 0° F. storage and 5,500 cubic feet was used as 32° F. to 50° F. storage. All firms showed a 10 percent greater average capacity in total refrigerated space (15,500 cubic feet) than cooperatives. Of this, 9,500 cubic feet was in 0° F. storage and 6,000 cubic feet in 32° F. to 50° F. storage.

Lockers Installed and Rented

In 1964, cooperatives reporting had an average of 400 lockers installed, a decline of approximately 30 percent from 5 years earlier (table 6). Seventy percent of the lockers installed in 1965 were rented, but unrented lockers still remain a chief problem of the industry. Although the average cooperative locker plant had less 0° F. storage space that the average of all firms, they averaged 19 percent more lockers installed than all firms and rented 17 percent more lockers.

Although the number of lockers rented has declined, income from locker rentals is still an important source of revenue, and operators can well afford to promote locker rentals.²

The cost of operating locker and bulk storage rooms is relatively constant regardless of the number of lockers or the amount of space rented. Therefore, after this basic cost is covered, additional rental income contributes directly to net earnings.

TABLE 6.--Average number of lockers installed and rented, and percentage of lockers rented, specified years

Year	Average ins	Lockers rented		Percentage lockers rente of those ins	d were	
	Cooperatives	All firms	Cooperatives	All firms	Cooperatives	All firms
		Num	ber		Percen	ıt_
1954	430	433	354	340	82	78
1959	459	404	321	279	70	69
1964	400	344	278	230	70	67

² Seymour, William R. The Changing Role of Frozen Food Locker Cooperatives. U.S. Dept. Agr. Farmer Cooperative Serv., Serv. Rpt. 83. 1966.

Standby Power Equipment

In 1965, 15 percent of the cooperatives reporting had provided for standby power equipment to run their plant in case of

electric power failure. Since standby power equipment is a type of insurance for locker plants, management needs to evaluate the costs and benefits of providing such insurance.

COMMERCIAL AND MERCHANDISING OPERATIONS

An increasing number of locker and freezer provisioning firms have expanded their operations to include a variety of commercial and merchandising operations in addition to their custom services. This has been encouraged by growth in use of homefreezers among farm and nonfarm families. Some firms have also increased their processing volume by supplying foods to the local institutional trade.

Commercial Operations

Both cooperatives and all firms have shown an increase in percentage of firms processing products for sale in 1965 over 1960 and 1955 (table 7). The proportions of cooperatives producing cured meats and of those producing pork sausage for sale increased 3 and 7 percentage points, respectively, compared with 0 and 5 percentage points for all firms, in 1965 over 1960. About one-third of the cooperatives are engaged in these two operations.

Since 1960, the percentage of cooperatives buying livestock for slaughter and resale increased 5 percentage points compared to 4 percentage points for all firms.

In 1960, 6 percent of the cooperatives were producing portion-control meats, compared with 12 percent for all firms. In 1965 this proportion had not changed for cooperatives; for all firms it increased to 14 percent.

TABLE 7.--Percent of locker and freezer provisioning firms engaged in commercial operations, 1955, 1960, and 1965

Commercial operation	Cooperatives			All firms					
	1955	1960	1965	1955	1960	1965			
	Percent								
Buy livestock for slaughter and resale	18	23	28	24	26	30			
Produce cured meat for sale	19	28	31	26	34	34			
Produce pork sausage for sale	19	27	34	34	42	47			
Portion meats	(1)	6	6	(1)	12	14			

¹Data not collected.

Merchandising Activities

Merchandising food and services to homefreezer owners is a growing activity in most successful locker and freezer provisioning firms. Cooperatives are moving ahead in these activities, but are feeling their way as they go because of the problems in organization and internal operations these new activities pose.

The major merchandising activities for cooperatives as well as for all firms are shown in table 8. In 1965, about half the cooperatives sold packer meats in wholesale cuts, compared with about two-thirds of all firms. This represented an increase of 13

percentage points for cooperatives and 11 points for all firms since 1960.

More cooperatives sold frozen food packed by other plants in 1965 than in 1960--24 percent in 1960 compared to 28 percent in 1965. All firms showed a decline of 3 percentage points.

The percentage of cooperatives engaged in financing or arranging financing for 60 days or more for bulk food sales more than doubled between 1960 and 1965 while the proportion of all firms increased 5 percentage points.

TABLE 8.--Percentages of frozen food locker and freezer provisioning cooperatives and all firms engaged in selected merchandising activities, 1955, 1960, and 1965

Merchandising activity	Cooperatives			All firms		
	1955	1960	1965	1955	1960	1965
	Percent			Percent		
Sell packer-slaughtered meat in wholesale cuts	34	34	47	54	54	65
Sell frozen food packed by other plants	34	24	28	54	51	48
Finance or arrange financing for 60 days or more for bulk food sales	7	13	27	16	31	36
Provide food delivery service	(1)	9	8	(1)	25	28
Rent homefreezers	(1)	(1)	2	(1)	(1)	3
Sell frozen meat in prepacked meat boxes or bundles	(1)	9	13	(1)	20	25
Maintain an inventory of frozen packaged retail meat cuts	(1)	7	13	(1)	13	16
Sell homefreezers	9	9	8	15	14	9

¹ Data not collected.

PROBLEMS AND OPPORTUNITIES

The fact that approximately 220 locker cooperatives have discontinued operations since 1960 should be a warning to cooperatives to be on the alert for weaknesses in their operations. The trend toward fewer but larger provisioning cooperatives will probably continue.

Downward trends in number of lockers rented will probably continue. A recent study by the Farmer Cooperative Service, however, suggests that as processing volume grows the rate of decline in locker rentals is slowed and in some cases reversed. Hence for those associations that actively promote locker rentals and processing volume, locker rental revenue will likely continue to be an important source of income.

For some cooperatives, opportunities for growth appear to be favorable because of increasing population, expanding use of home-freezers, rising standard of living, and increasing desire for convenience foods. But not all cooperatives will benefit from the growing population. People have been moving from small towns to metropolitan areas. This does not indicate a bright future for many cooperatives in small towns away from metropoli-

tan areas. In these areas cooperatives will have to gain new outlets for their products and services. This can be accomplished by enlarging their trade territory and promoting their custom and processing services.

Locker cooperatives can serve the institutional trade in many small communities that large meatpackers cannot economically serve. A local cooperative frequently has lower transportation and handling costs in serving these local markets than regional or national packers.

To capitalize on their opportunities and improve services to member-patrons, management of frozen food locker and similar local processing cooperatives needs to devote greater attention to setting goals and then seeing that these goals are attained.

Management and members also need to consider a basic question: Will the cooperative organize and operate as a service, marketing, or consumer cooperative or some combination thereof? This will depend upon who is to own, control, and benefit from its operations. Until the members decide what kind of cooperative they want, they will find it difficult to tell what laws and regulations apply, where control rests, how patronage refunds should be allocated and distributed, and other questions that further relate to the distinct nature of the cooperative form of organization.

³ Miner, Bert D., Seymour, William R., and Parsons, Richard P. Frozen Food Locker and Freezer Provisioning Industry, 1965. U.S. Dept. Agr. Mktg. Res. Rpt. 779. 1966.

Other Publications Available

Farmer Cooperatives ... Farm Business Tools. Agricultural Information Bulletin 275. Beryle Stanton.

Outdoor Recreation -- A New Potential for Cooperation. Educational Circular 28. Clyde B. Markeson and Job K. Savage.

How to Start a Cooperative. Educational Circular 18.

Managing Farmer Cooperatives. Educational Circular 17. Kelsey B. Gardner.

Sizing Up Your Cooperative. Educational Circular 11.

Two Supply Cooperatives Serving Low Income Farmers - A Preliminary Analysis in Appalachia. General Report 138. John M. Bailey.

Frozen Food Locker and Freezer Provisioning Industry, 1965. Agr. Mktg. Res. Rpt. 779. Bert D. Miner, William R. Seymour, and Richard P. Parsons.

The Changing Role of Frozen Food Locker Cooperatives. Service Report 83, William R. Seymour.

Copies of these publications may be obtained upon request while a supply is available from

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